WHAT IS CLAIMED IS:

1. A semiconductor light-emitting device comprising:

first and second semiconductor layers each of a first conductivity type;

a third semiconductor layer of a second conductivity type provided between the first and second semiconductor layers;

an active layer provided between the second and third semiconductor layers, the active layer emitting light with charge injected therein from the second and third semiconductor layers; and

a graded composition layer provided between the active layer and the third semiconductor layer to have a varying composition which is nearly equal to a composition of the active layer at an interface with the active layer and to a composition of the third semiconductor layer at an interface with the third semiconductor layer.

2. A semiconductor light-emitting device comprising:

first and second semiconductor layers each of a first conductivity type;

a third semiconductor layer of a second conductivity type provided between the first and second semiconductor layers, the third semiconductor layer having a forbidden band as an electron energy band which is smaller in width than a forbidden band in each of the first and second semiconductor

layers; and

a graded composition layer provided between the first and third semiconductor layers to have a varying composition which is nearly equal to a composition of the first semiconductor layer at an interface with the first semiconductor layer and to a composition of the third semiconductor layer at an interface with the third semiconductor layer,

the third semiconductor layer emitting light with charge injected therein from the second and third semiconductor layers.

3. The semiconductor light-emitting device of claim 2, wherein an impurity concentration in the second semiconductor layer is higher at least in a region thereof opposed to the first semiconductor layer than in the first semiconductor layer.

4. A semiconductor light-emitting device comprising:

first and second semiconductor layers each of a p-type conductivity; and

a third semiconductor layer of an n-type conductivity provided between the first and second semiconductor layers, the third semiconductor layer having a forbidden band as an electron energy band which is smaller in width than a forbidden band in each of the first and second semiconductor layers,

the third semiconductor layer emitting light with charge injected therein from the second and third semiconductor layers,

an energy value at an upper end of a valence band as an electron energy band being lower in the first semiconductor layer than in the second semiconductor layer.

5. The semiconductor light-emitting device of claim 4, wherein an impurity concentration in the second semiconductor layer is higher at least in a region thereof opposed to the first semiconductor layer than in the first semiconductor layer.

6. A semiconductor light-emitting device comprising:

first and second semiconductor layers each of an n-type conductivity; and

a third semiconductor layer of a p-type conductivity provided between the first and second semiconductor layers, the third semiconductor layer having a forbidden band as an electron energy band which is smaller in width than a forbidden band in each of the first and second semiconductor layers,

the third semiconductor layer emitting light with charge injected therein from the second and third semiconductor layers,

an energy value at a lower end of a conduction band as an electron energy band being higher in the first

semiconductor layer than in the second semiconductor layer.

7. The semiconductor light-emitting device of claim 6, wherein an impurity concentration in the second semiconductor layer is higher at least in a region thereof opposed to the first semiconductor layer than in the first semiconductor layer.

8. A semiconductor light-emitting device comprising:

first and second semiconductor layers each of a first conductivity type;

a third semiconductor layer of a second conductivity type provided between the first and second semiconductor layers, the third semiconductor layer having a forbidden band as an electron energy band which is smaller in width than a forbidden band in each of the first and second semiconductor layers; and

a lightly doped semiconductor layer provided between the first and third semiconductor layers, the lightly doped semiconductor layer having an impurity concentration which is lower than an impurity concentration in each of the first and third semiconductor layers,

the third semiconductor layer emitting light with charge injected therein from the second and third semiconductor layers.

9. The semiconductor light-emitting device of claim 8, wherein the lightly doped semiconductor layer is an undoped

layer undoped with an impurity.

10. The semiconductor light-emitting device of claim 8, wherein the lightly doped semiconductor layer has the second conductivity type.

11. An apparatus for driving a semiconductor light-emitting device comprising first and second semiconductor layers each of a first conductivity type and a third semiconductor layer of a second conductivity type provided between the first and second semiconductor layers, the apparatus comprising:

constant-current control means;

light-emission control means for controlling a state of light emitted from the semiconductor light-emitting device; and

specified-potential applying means for applying a specified potential to the third semiconductor layer of the semiconductor light-emitting device,

the constant-current control means supplying a specified driving current to the second semiconductor layer of the semiconductor light-emitting device,

the light-emission control means adjusting an amount of light emitted from the semiconductor light-emitting device by applying different voltages to the first semiconductor layer or by bringing the first semiconductor layer into different states of impedance.

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